

## **EF-2000 Systems, abbreviations:**

### **Displays:**

**MIDS:** Multifunction Information Distribution System  
**MHDD:** Multifunction Head Down Displays  
**WP:** Warning Panel

### **Miscellaneous:**

**HUD:** Head Up Display  
**FCS:** Flight Control System  
**APU:** Auxiliary Power Unit  
**MSOC:** Molecular Sieve Oxygen Concentrator  
**DVI:** Direct Voice Input  
**DVO:** Direct Voice Output (Voice warning system)  
**HOTAS:** Hands On Throttle And Stick  
**VTAS:** Voice Throttle and Stick  
**FBW:** Fly By Wire  
**CADC:** Central Air Data Computer  
**TACAN:** Tactical Air Navigation  
**MMD:** Moving Map Display

**NIS:** NATO Identification System  
**INT:** Interrogator  
**XPDR:** Transponder

### **GSS: Ground Support System:**

**ESS:** Engineering Support System  
**MSS:** Mission Support System  
**GLU:** Ground Loading and Data transfer Unit

### **DASS: Defensive Aids Sub System:**

**LRU's:** Line Replacable Units (warning systems)  
**DAC:** Defensive Air Computer (Evaluates information and checks systems)

**ESM:** Electronic Support Measures: Sensors aided by:  
**RWR:** Radar Warning Receiver (Sensors that discover Radar emitting)  
**LWR:** Laser Warning Receiver (Sensors that discover targeting own AC with Laser)  
**MAW:** Missile Approach Warner (Warning for incoming missiles)

**Chaff/Flares:** Dispensers  
**TRD:** Towed Radar Decoy  
**ECM:** Electronic Counter Measures

### **AIS: Attack Identification System:**

**AC:** Avionics Computer  
**NC:** Navigation Computer  
**EMCON:** Emission Control (Emission of necessary systems only)

### **IFF: Identification Friend or Foe**

Identifies targets and friends and identifies friends for allies

**CAPTOR Radar:**

DAS: Data Adaptive Scanning  
STT: Single Target track  
NCTR: Non Cooperative Target Recognition  
ECM: Electronic Counter Measures  
ECCM: Electronic Counter Counter Measures

**CAPTOR A/A modes:**

**BVR:** Beyond Visible Range:  
- RWS: Range While Scan  
- TWS: Track While Scan  
- VS: Velocity Search

**CAC:** Close Air Combat:

- HUD Acquisition  
- Boresight Acquisition  
- Vertical Acquisition  
- Slaved Acquisition

**CAPTOR A/G modes:**

- SSS: Sea Surface Search  
- DBS: Doppler Beam Sharpening  
- VS: Velocity Search  
- GMTI: Ground Moving target Indication  
- GMTT: Ground Moving target Track  
- TA: Terrain Avoidance  
- FTT: Fixed Target Track

**PIRATE:** Passive Infrared Airborne Tracking Equipment

**PIRATE A/A modes:**

**MTT:** Multi Target Track  
**SACQ:** Slaved Acquisition  
**STT:** Single Target track  
**STTI:** Single Target track Identification

**PIRATE A/G mode:**

**FLIR:** Forward Looking Infrared

## **RAMPSTART Checklist EF-2000 Typhoon**

### **Pre-start**

1. Parking brake to ON - view 2
2. BATT switch to ON - view 6
3. Push PAGE button on warning panel - view 4
4. Set MHDD's to ON - view 1
5. Set GLU Data cartridge turning switch to LIVE - view 6

### **Fuel and air to engine**

6. Set Left Boost pump to ON - view 6
7. Set right boost pump to ON - view 6
8. Set MSOC switch to ON - view 6
9. Set AIR drive to AUTO - view 6

### **Start-up engine**

(Use keys ctrl-o for selecting left engine)

10. Throttle to idle
11. APU button to RUN - view 6
12. RPM at 20% - HOTAS
13. Throttle to 50% - HOTAS
14. Set START/STOP switch to START - view 6
15. Throttle to 70% - HOTAS
16. If RPM is at 60% throttle to idle - HOTAS

(Use keys ctrl-o for selecting right engine,  
and repeat steps 10-16, then use keys ctrl-o for selecting both engines)

### **Start-up of electronics and avionics**

17. Enable Flight Control System (FCS) - view 1
18. Set MIDS to ON - view 1
19. Set GPS switch to ON - view 6
10. Set Stores management(STOR) to ON - view 1
21. Set INS to ALIGN NORM - view 1
  
22. Set RADAR to ON - view 6
23. Set RADAR ALT to STBY - view 6
24. Set HUD to ON with brightness turning knob - view 1
25. Set Left and right Gear Box (GBOX) to ON - view 5
26. Set MIDS A and B volume as appropriate - view 5
27. Set MSSL volume as appropriate - view 5
28. Set I/C volume as appropriate - view 5

### **Countermeasures**

29. Set DASS power to ON - view 1
30. Set transponder (XPDR) switch to ON - view 6
31. Set MAW switch and W/S NTR switch to ON - view 6
32. Set Chaff power to ON - view 1
33. Set Flares power to ON - view 1
34. Select Program (PRGM) according to threats - view 1
35. Select MODE (MODE) according to threats - view 1

### Prepare for taxi

- 36. Set ejection seat to ARMED - view 4
- 37. Set external lights Master button to ON - view 4
- 38. Set Navigation lights to BRT - view 4
- 39. Set Anti Collision lights to WHITE - view 4
- 40. Set formation lights to ON - view 4
- 41. Set LANDING/TAXI lights to TAXI - view 2
- 42. Close backup instruments cover - view 1
- 43. Enable Nose Wheel Steering(NWS) (keys shift-/) HOTAS

### Initiating taxi and take-off

- 44. Set INS ALIGN from NORM to NAV - view 1
- 45. Set RADAR ALT to ON - view 6
- 46. Set Parking brake to OFF - view 2
- 47. Taxi to runway according to ATC commands

